IT IS THE VENDOR'S RESPONSIBILITY TO CHECK
FOR ADDENDUMS PRIOR TO SUBMITTING PROPOSALS

REQUEST FOR PROPOSALS
SPECIFICATION NO. 03-025

The City of Lincoln, Nebraska intends to contract for and invites you to submit a sealed proposal for professional engineering services related to the project listed and described below:

DESIGN OF
TREATMENT FACILITY IMPROVEMENTS
FOR THE
THERESA STREET AND NORTHEAST WASTEWATER TREATMENT FACILITIES
FOR THE
LINCOLN WASTEWATER SYSTEM

Sealed proposals will be received by the City of Lincoln, Nebraska on or before 12:00 noon, Wednesday, February 5, 2003 in the office of the Purchasing Agent, located at Suite 200, K Street Complex, 440 South 8 Street, Lincoln, Nebraska, 68508. **Proposals will be publicly opened, reading only the names of those submitting proposals, at the K Street Complex. Proposal fees will not be disclosed while proposals are being opened.**

A copy of the request for proposal may be obtained from the Purchasing Division web site at:
http://www.ci.lincoln.ne.us

All communications relative to this work prior to the opening of the proposals shall be directed to the Project Selection Committee Chair, Gary Brandt, Utilities Coordinator, telephone: 402-441-7968.

Submitter should take caution if U.S. mail or mail delivery services are used for the submission of proposals. Mailing should be made in sufficient time for proposals to arrive in the Purchasing Division prior to the time and date specified above.

INSTRUCTIONS TO PROPOSERS

CITY OF LINCOLN, NEBRASKA
PURCHASING DIVISION

1. PROPOSAL PROCEDURE

1.1 Each RFP must be legibly printed in ink or by typewriter, include full name, business address, and telephone no. of the Proposer; and be signed in ink by the Proposer.

1.2 Response by a firm/organization other than a corporation must include the name and address of each member.

1.3 A response by a corporation must be signed in the name of such corporation by a duly authorized official thereof.

1.4 Any person signing a response for a firm, corporation, or other organization must show evidence of his authority so to bind such firm, corporation, or organization.

1.5 Proposals received after the time and date established for receiving offers will be rejected.

2. EQUAL OPPORTUNITY

2.1 Each proposer agrees that it shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, disability, national origin, age, or marital status. In the employment of persons, proposer shall take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to race, color, religion, sex, disability, national origin, age, or marital status.

3. DATA PRIVACY

3.1 Proposer agrees to abide by all applicable State and Federal laws and regulations concerning the handling and disclosure of private and confidential information concerning individuals and corporations as to inventions, copyrights, patents and patent rights.

3.2 The proposer agrees to hold the City harmless from any claims resulting from the proposer's unlawful disclosure or use of private or confidential information.

4. PROPOSER'S REPRESENTATION

4.1 Each proposer by signing and submitting an offer, represents that he/she has read and understands the specification documents, and the offer has been made in accordance therewith.

4.2 Each offer for services further represents that the proposer is familiar with the local conditions under which the work and has correlated the observations with the requirements of the RFP.

4.3 Proposer Warrants and represents to the City that all software/firmware/hardware/equipment/systems developed, distributed, installed or programmed by Proposer pursuant to this Specification and Agreement.

4.3.1 That all date recognition and processing by the software/firmware/ hardware/equipment/system will include the four-digit-year format and will correctly recognize and process the date of February 29, and any related data, during Leap years; and

4.3.2 That all date sorting by the software/ firmware/hardware/equipment/system that includes a "year category" shall be done based on the four-digit-year format. Upon being notified in writing by the City of the failure of any software/firmware/ hardware/equipment/ systems to comply with this Specification and Agreement, Contractor will, within 60 days and at no cost to the City, replace or correct the non-complying software/firmware/hardware/ equipment/systems with software/firmware/ hardware/equipment/systems that does comply with this Specification and Agreement.

5. INDEPENDENT PRICE DETERMINATION

5.1 By signing and submitting this RFP, the proposer certifies that the prices offered have been arrived at independently, without consultation, communication or agreement, for the purpose of restricting competition, with any other proposer competitor; unless otherwise required by law, the prices which have been quoted in this offer have not been knowingly disclosed by the proposer prior to RFP opening directly or indirectly to any other competitor; no attempt has been made, or will be made, by the proposer to induce any person or firm to submit, or not to submit, a response for the purpose of restricting competition.

6. SPECIFICATION CLARIFICATION

6.1 Proposers shall promptly notify the Purchasing Agent of any ambiguity, inconsistency or error which they may discover upon examination of specification documents.

6.2 Proposers desiring clarification or interpretation of the specification documents shall make a written request which must reach the Purchasing Agent at least seven (7) calendar days prior to date and time for response receipt.

6.3 Interpretations, corrections and changes made to the specification documents will be made by written addenda.

6.4 Oral interpretations/changes to Specification Documents made in any other manner, will not be binding on the City; proposers shall not rely upon oral interpretations.

7. ADDENDA

7.1 Addenda are written instruments issued by the City prior to the date for receipt of offers which modify or interpret the specification document by addition, deletion, clarification or correction.

7.2 Addenda will be mailed or delivered to all who are known by the City to have received a complete set of specification documents.

7.3 Copies of addenda will be made available for inspection at the office of the Purchasing Agent.

7.4 No addendum will be issued later than forty-eight (48) hours prior to the date and time for receipt of offers, except an addendum withdrawing the RFP, or addendum including postponement.

7.5 Proposers shall ascertain prior to submitting their offer that they have received all addenda issued, and they shall acknowledge receipt of addenda on the proposal form.

8. ANTI-LOBBYING PROVISION

8.1 During the period between the bid close date and the contract award, bidders, including their agents and representatives, shall not directly discuss or promote their bid with any member of the City Council or City Staff except in the course of City-sponsored inquiries, briefings, interviews, or presentations, unless requested by the City.

9. EVALUATION AND AWARD

9.1 The signed proposal shall be considered an offer on the part of the proposer. Such offer shall be deemed accepted upon issuance by the City of purchase orders, contract award notifications, or other contract documents appropriate to the work.

9.2 No offer shall be withdrawn for a period of ninety (90) calendar days after the time and date established for receiving offers, and each proposer agrees in submitting an offer.

9.3 In case of a discrepancy between the unit prices and their extensions, the unit prices shall govern.

9.4 The RFP process is designed to be a competitive negotiation platform, where price is not required to be the sole determinative factor; also the City has the flexibility to negotiate with a select firm or selected firms to arrive at a mutually agreeable relationship.

9.5 A committee will be assigned the task of reviewing the proposals received.

9.5.1 The committee may request documentation from Proposer(s) of any information provided in their proposal response, or require the Proposer to clarify or expand qualification statements.

9.5.2 The committee may also require a site visit and/or verbal interview with a Proposer or select group of Proposers to clarify and expand upon the proposal response.

9.6 The offer will be awarded to the lowest responsive, responsible proposer whose proposal will be most advantageous to the City, and as the City deem will best serve their requirements.

9.7 The City reserves the right to accept or reject any or all offers, parts of offers; request new proposals, waive irregularities and technicalities in offers; or to award the RFP on a split-order basis, or lump-sum basis; such as shall best serve the requirements and interests of the City.

10. INDEMNIFICATION

10.1 The proposer shall indemnify and hold harmless the City, its members, its officers and employees from and against all claims, damages, losses, and expenses, including, but not limited to attorney's fees arising out of or resulting from the performance of the contract, provided that any such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property other than goods, materials and equipment furnished under this contract) including the loss of use resulting therefrom; is caused in whole or part by any negligent act or omission of the proposer, any subcontractor, or anyone directly or indirectly employed by any one of them or anyone for whose acts made by any of them may be liable, regardless of whether or not it is caused by a party indemnified hereunder.

10.2 In any and all claims against the City or any of its members, officers or employees by an employee of the proposer, any subcontractor, anyone directly or indirectly employed by any of them or by anyone for whose acts made by any of them may be liable, the indemnification obligation under paragraph 10.1 shall not be limited in any way by any limitation of the amount or type of damages, compensation or benefits payable by or for the proposer or any subcontractor under worker's or workmen's compensation acts, disability benefit acts or other employee benefit acts.

11. LAWS

11.1 The Laws of the State of Nebraska shall govern the rights, obligations, and remedies of the Parties under this proposal and any agreement reached as a result of this process.

REQUEST FOR PROPOSALS
SPECIFICATION NO. 03-025

DESIGN OF
TREATMENT FACILITY IMPROVEMENTS
FOR THE
THERESA STREET AND NORTHEAST
WASTEWATER TREATMENT FACILITIES
FOR THE
LINCOLN WASTEWATER SYSTEM

1. PURPOSE AND INTENT

1.1 The City intends to retain a professional engineering firm or firm(s) to provide normal and customary preliminary and final engineering design services for construction of the following project at the Theresa Street (TSTP) and Northeast (NETP) Wastewater Treatment Facilities.

2. THERESA STREET WWTF

2.1 **Nitrification Capacity Improvements** (Project No. 502420) to meet new NPDES discharge permit limits and additional capacity requirements.

2.2 **New Primary Clarifier** (Project No. to be assigned) to replace existing Primary Clarifier No.'s 1 & 2, and provide additional capacity for future growth, including: replacement and relocation of existing West Side primary sludge pumping station; and, related modifications and improvements to connect to future peak wet-weather flow treatment facilities to meet new Sanitary Sewer Overflow (SSO) regulations.

2.3 **Final Clarifier modifications and improvements** (Project No. 502420) to the four (4) existing final clarifiers full surface skimming equipment and improvements to effluent launders for control of algae growth.

2.4 Other related improvements associated with the above projects including necessary modifications to existing plant pumping and piping; hydraulic modifications and improvements; modifications to existing plant electrical and SCADA systems; and, other modifications to the site to accommodate the above noted projects.

3. NORTHEAST WWTF

3.1 **Nitrification Capacity Improvements** (Project No. 502510) to meet new NPDES discharge permit limits and additional capacity requirements.

3.2 **Grit Handling Improvements** (Project No. to be assigned)to the existing system to improve handling and removal efficiencies; provide additional capacity for future growth; and, related modifications and improvements to meet future peak flow requirements to connect to future peak wet-weather flow treatment facilities to meet new Sanitary Sewer Overflow (SSO) regulations.

3.3 **Final Clarifier modifications and improvements** (Project No. 502510) to the two (2) existing final clarifiers surface skimming and effluent launders for control of algae growth.

3.4 **Other related improvements associated with the above projects** including other necessary process piping and pumping changes; modifications to existing plant electrical and SCADA systems; and, other modifications to the site to accommodate the above noted projects.

4. GENERAL AND BACKGROUND - THERESA ST. FACILITY

4.1 This facility has a current maximum monthly treatment capacity of 28.0 million gallons per day (mgd) based on the current NPDES limits and annual average flows are approximately twenty (20) mgd.

4.2 Description of current liquid flow scheme.

4.2.1 A general schematic flow diagram for the treatment facility is shown in Figure No. 1, Liquid Process Diagram, attached to this RFP.

4.2.2 The liquid stream treatment process consists of preliminary and secondary treatment followed by seasonal disinfection of the effluent in the summer months prior to discharge into Salt Creek.

4.2.3 Preliminary treatment includes influent screening by mechanically cleaned bar screens, pumping, flow splitting to aerated grit removal basins, followed by primary clarification.

4.2.4 Secondary treatment is accomplished by three individual flow trains with the noted calculated maximum monthly treatment capacities for secondary treatment: Trickling Filter Train (5 mgd); West Side Activated Sludge Train (7 mgd); and a East Side Activated Sludge Train (16 mgd) based on the current NPDES permit limits.

4.2.5 Each of these trains are followed by secondary clarification.

4.2.6 Final effluent passes to a chlorination basin where it is chlorinated prior to discharge into Salt Creek. Currently, seasonal chlorination during the summer season (April thru Sept.) is required.

4.3 Description of solids flow scheme and treatment (see Figure No. 2 attached to this RFP).

4.3.1 Solids treatment consists of raw influent screening, anaerobic digestion of primary and thickened waste activated solids, scum, and compatible liquid wastes received at a liquid waste receiving station.

4.3.2 Influent screenings removed by bar screens are dewatered and hauled to the sanitary landfill for disposal by a contract hauler.

4.3.3 Primary solids are pumped from the clarifiers to a solids mix tank located on the lower level of the belt filter press dewatering building prior to being pumped directly to the anaerobic digesters.

4.3.4 Secondary solids pumped from secondary clarifiers are thickened to approximately 4-5% solids by three (3) DAF units using polymer as a coagulant aid in the thickening building located by the East Side activated sludge basins.

4.3.4.1 The thickened solids are then pumped to the solids mix tank described below.

4.3.5 Liquid Waste Dump Station. Liquid wastes containing grit and mud from mud traps are collected at the Dump Station; pumped to a grit classifier and washer located in the Operations Control Center Bldg; and, are then trucked to the landfill.

4.3.5.1 Septage wastes from the Dump Station that are compatible to biological treatment are routed to the solids mix tank and subsequently pumped to the anaerobic digesters.

4.3.6 A solids mix tank (approximately 6,000 gallons) receives solids pumped from the above sources and serves as a mix and reservoir suction tank for pumps that transfer the mixed solids to the anaerobic digesters.

4.3.7 Mixed solids pumped to the anaerobic digesters are screened by a Parkson sludge strainer prior to entering the digesters and collected screenings are hauled to the Landfill by a contract hauler.

4.4 Recent and Current Projects and Improvements

4.4.1 West Side Activated Sludge Train.

4.4.1.1 In 2000, the system was modified to a plug flow process scheme that includes anoxic and aerobic zones to provide for nitrification capability.

4.4.1.1.1 The currently rated nitrification capacity for this train is 4.7 mgd at maximum month loadings based on the proposed NPDES permit.

4.4.1.2 Additional modifications to this system currently include the addition of foam selector skimming capabilities to skim foam from one of the aerobic zones in the activated sludge tanks (completion in Fall, 2002) and replacement of the existing aeration blowers and related electrical and control system for the blowers (completion in late Summer, 2003).

4.4.2 East Side Activated Sludge Train Improvements

4.4.2.1 Currently, a project is underway to modify this system to the same plug flow process scheme, anoxic & aerobic, as the one noted above for the West Side system. Improvements are tentatively scheduled for completion in summer of 2003 and the projected nitrification capacity of this train is estimated to be 9.7 mgd at maximum month loadings.

4.4.3 Main Electrical Sub-Station and Electrical Distribution Improvements currently under construction.

4.4.3.1 Addition of a new main substation power transformer, substation circuit breakers, substation wiring improvements and related electrical distribution improvements serve to provide: additional capacity; redundancy in power supply; looped power for better reliability of operation; and, service capacity for the noted improvement projects herein and future capacity improvements at the treatment plant.

4.4.3.2 Addition of flood protection and reliability of operation for the existing main substation, switchgear, key electrical distribution transformers and key access doors to critical buildings on the site.

4.4.3.2.1 Completion is scheduled for Sept., 2003.

4.4.4 Effluent Disinfection Improvements

4.4.4.1 A design is underway for replacing the existing gaseous chlorination system with Low Pressure High Intensity ultraviolet (UV) disinfection and a supplemental liquid chlorination system (NaOCL) for disinfecting the final effluent to meet future requirements.

4.4.4.1.1 Improvements are tentatively scheduled for completion in the Spring of 2003.

4.4.5 Grit Handling Improvements.

4.4.5.1 A design is underway for replacing the existing grit basins with new vortex grit removal units and handling equipment including facilities for handling mud trap grit waste from local liquid tanker truck haulers that is currently handled at the existing liquid waste dump station.

4.4.5.1.1 Design is scheduled for completion in Nov., 2002.

4.4.6 Odor Control Improvements

4.4.6.1 A study and design of additional odor control facilities is also currently underway and the preliminary design phase is scheduled for completion in the Nov., 2002.

5. GENERAL AND BACKGROUND – NORTHEAST FACILITY

5.1 This facility has a current maximum monthly treatment capacity of 8.0 million gallons per day (mgd) and annual average flows are approximately 6.5 mgd.

5.2 Description of existing liquid flow scheme.

5.2.1 A general schematic flow diagram for the treatment facility is shown in Figure No. 3, Liquid Process Diagram, attached to this RFP.

5.2.2 The liquid stream treatment process consists of preliminary and secondary treatment followed by seasonal disinfection of the effluent prior to discharge in Salt Creek.

5.2.3 Preliminary treatment includes influent screening by mechanically cleaned bar screens, pumping, aerated grit removal followed by primary clarification.

5.2.4 Secondary treatment consists of redwood media trickling filter, activated sludge using fine bubble diffusion, and final clarification.

5.2.5 Final effluent passes to a chlorination basin where it is chlorinated prior to discharge to Salt Creek. Currently, seasonal chlorination during the summer season (April thru Sept.) is currently required.

5.3 Description of solids flow scheme and treatment (see Figure No. 4 attached to this RFP).

5.3.1 Solids treatment consists of raw influent screening and anaerobic digestion of primary and thickened waste activated solids and process scum.

5.3.2 Influent screenings removed by bar screens are dewatered and hauled to the sanitary landfill for disposal by a contract hauler.

5.3.3 Currently, improvements to the solids handling system are under construction and the following generally describes the solids flow scheme for solids that will occur when this project is complete.

5.3.3.1 Primary solids will be pumped from the clarifiers to a Parkson sludge screen press and then to the anaerobic digesters.

5.3.3.2 Secondary solids will be pumped from secondary clarifiers to a WAS holding tank (converted aerobic digester) and then thickened by two (2) rotary drum thickners using polymer prior to discharge to a thickened WAS holding tank and final pumping to two anaerobic digesters that are being modified as part of the aforementioned construction project.

5.3.3.3 Digested liquid biosolids at approx. 3% concentration will then be pumped to an existing solids holding pond and subsurface injected on City owned agricultural farmland.

5.3.3.4 The current plan is for process waters from the thickening process and supernatant from the anaerobic digesters and biosolids holding pond to return to the influent headworks for mixing with the influent flows.

5.4 Recent and Current Projects and Improvements.

5.4.1 Current improvements and projects Effluent Disinfection Improvements

5.4.1.1 A design is underway for replacement of the existing gaseous chlorination system with Low Pressure High Intensity ultraviolet (UV) disinfection and a supplemental liquid chlorination system (NaOCL) for disinfecting the final effluent to meet future requirements.

5.4.1.1.1 Improvements are tentatively scheduled for completion in the Spring of 2003.

5.4.2 Replacement of the existing influent bar screens and screenings handling system.

5.4.2.1 Design is underway for replacement of the existing two(2) influent bar screens and installation of new screenings wash and compression system. Improvements are scheduled for completion in Summer of 2003.

5.4.3 Replacement of a portion of the Hot Water Heating Loop system for certain process buildings in under construction and scheduled for completion in Nov., 2002.

5.4.4 Construction of LES Salt Valley Generating Station Final Effluent Pumping and cooling water return line.

5.4.5 Construction of the Pumping Station, force main, and return line to use the final effluent for cooling water in the operation of the Generating Station is currently under construction and is scheduled for completion and startup in the summer of 2003.

6. AVAILABLE INFORMATION

6.1 General.

6.1.1 The information is available for review at the offices of the Lincoln Wastewater System, 2400 Theresa Street, Lincoln, Nebraska.

6.1.2 Copies may be furnished for the cost of reproduction, handling, and mailing unless otherwise noted below. Contact the Project Selection Committee Chair to review or obtain copies.

6.2 Applicable Documents.

6.2.1 Various As-Built and Record Drawings for the Theresa Street Wastewater Treatment Plant. See Project Selection Committee Chair for copies of pertinent plan sheets.

6.2.2 A Lincoln Wastewater System, Facilities Plan Report @, latest update (2002), Brown and Caldwell.

6.2.2.1 This plan is in final draft form and scheduled for completion in Sept., 2002.

6.2.2.2 Copies of this report are available for review by interested firms.

6.2.3 A Theresa Street Wastewater Treatment Facility / Evaluation of Influent Pumping, Preliminary Treatment and Primary Clarification Facilities @, June, 1998, @ Black & Veatch, and Olsson Associates.

6.2.3.1 Copies of this report can be made available at the cost of reproduction.

6.2.4 Construction Contract Documents East Side Aeration Improvements at Theresa Street WWTP.

6.2.4.1 Currently under construction with completion scheduled for Summer, 2003, Brown & Caldwell Engineers.

6.2.5 Preliminary Study and Design for Disinfection Improvements, Ultraviolet and supplemental chlorination, at Theresa Street and Northeast Wastewater Treatment Facilities.

6.2.5.1 Currently under design by Jacobson-Helgoth Consultants & Montgomery Watson Harza.

6.2.6 Technical memorandums and preliminary design documents related to Odor Control Improvements for the Theresa Street WWTP. HDR Engineering Inc., and Huber Environmental Inc.

6.2.7 Technical memorandums and preliminary design documents for Grit Handling Improvements at Theresa Street, Black & Veatch, Kansas City, MO.

6.2.8 Construction plans and specifications for Solids Handling Improvements, Northeast WWTP, HDR engineering Inc, Omaha, NE.

6.2.8.1 Currently under contract with Judd Brothers Construction, Lincoln, NE.

6.2.9 City of Lincoln Comprehensive Plan Update, 2002.

6.2.10 Pertinent operational data, reports, etc., for the various components of the treatment process.

6.2.11 City of Lincoln Capital Improvements Program, FY 2002-03 to 07-08, available on City of Lincoln Interlinc web site, (http://www.ci.lincoln.ne.us/city/plan/capital/02-2008/index.htm)

6.3 Word Processing and CAD Formats.

6.3.1 Current word processing program. WordPerfect, Version 9, for Windows.

6.3.2 CAD format. Bently-Integraph Microstation.

7. <u>REQUIRED SERVICES TO APPLY TO ALL NOTED PROJECTS EXCEPT WHERE MODIFIED HEREIN</u>

7.1 Initially meet with City Project Team to review the scope of required services, design criteria and expectations, obtain background information, and establish tentative schedule for completion.

7.2 Prepare a preliminary design memorandum which defines in detail the Consultant's and City's mutually agreed understanding of project scope, objectives, and schedule, including budgetary information.

7.2.1 Meet with City staff to review the memorandum for each project.

7.3 Review related and pertinent construction drawings of both treatment facilities, current operational practices, flows and loads (current and future), wastewater quality information, and other related information which may effect facility design.

7.4 Prepare preliminary designs and evaluations to determine the most cost effective and feasible alternatives including: preliminary plans and specifications, layout sketches, lists of equipment and key features, estimated project costs, time schedules for construction, outline of interim operations anticipated during construction, etc., and conceptual design criteria to clearly indicate the considerations involved.

7.5 Estimated project costs to include construction, engineering, construction management, start-up, and administration costs.

7.6 Prepare preliminary design, evaluation, and recommendations information and reports to provide for updating current Facilities Planning documents, as appropriate.

7.7 Prepare and submit six (6) copies of preliminary design and studies report, including executive summary, summarizing the evaluations, findings, conclusions, updated opinions of total project costs, recommendation of most feasible alternative, and phasing plans and schedules for implementation in hard copy and / or electronic media.

7.8 Coordinate and meet with City project team to: present report, discuss, and recommended alternatives, select alternative for final design, and revise final design memorandum for Nitrification Improvements, Lincoln Wastewater System.

7.9 Prepare reports in computerized word processing and Microstation CAD format acceptable to the City.

8. FINAL DESIGN, BIDDING ASSISTANCE, AND BASIC CONSTRUCTION PHASE SERVICES

8.1 Complete final design drawings, technical specifications, and contract documents for bidding and construction of projects in accordance with design memorandums for Nitrification Improvements, Lincoln Wastewater System.

8.2 Prepare all documents in computerized word processing and computer CAD file formats acceptable for transfer and use by City's systems.

8.3 Prepare all applications for required Federal, State, or local permits for construction including floodplain permits, 404 permits, storm water permits, NDEQ construction permits, etc., and insure all data is sufficient for receiving such permits.

8.4 Submit completed design documents to NDEQ and other local regulatory agencies as required and assist City in obtaining approval for improvements from such agencies.

8.5 Submit six (6) printed copies and one computerized file copy of final design and construction contract documents and meet with City project team to present and review final design documents.

9. BIDDING ASSISTANCE

9.1 Assist City in obtaining bids for construction, including: providing and distributing copies of bidding documents to prospective bidders; coordinating and attending pre-bid meetings, when required; answering all technical questions from prospective bidders; preparing bid addenda as required; reviewing and evaluating bids received; recommending award of contract for construction; and, assisting City in completing and executing Contract Documents as requested.

10. BASIC CONSTRUCTION PHASE SERVICES

10.1 Perform normal and customary basic engineering and construction management services during construction, including:

10.1.1 Conducting pre-construction and monthly construction progress meetings including: recording and submitting minutes of meetings and reviewing project status and budget reports.

10.1.2 Reviewing and approving all contractor submittals and shop drawings for conformance with contract documents and processing and certifying all contractor requests for payment.

10.1.3 Preparing and processing all necessary construction contract change order justifications and related changes to contract documents as may be necessary.

10.1.4 Conducting periodic field inspections during construction and final inspection to certify that construction is completed in accordance with all contract documents and permits.

10.1.5 Coordinating and/or performing initial start-up and training services required and assembling operational and maintenance manuals for equipment and other related items for the constructed project.

10.1.6 Preparing and providing Mylar reproducible sets of record drawings and CAD compatible drawing files suitable for transfer to the City'=s computerized engineering and mapping (CEIS) system.

10.1.7 Performing 6-month and 11-month warranty inspections of completed construction to certify compliance with all contract document warranty requirements and review operations for conformance to design.

10.1.8 Conducting operational review and training sessions for specific process changes as requested and submitting written inspection reports.

11. ADDITIONAL CONSTRUCTION PHASE AND OTHER SERVICES

11.1 Based on the firm's performance and at the sole option of the City, additional services during the construction phase, such as construction inspection/resident engineering services, shall be reviewed and negotiated at a later time, as necessary.

11.2 Other services as requested by the City shall also be reviewed and negotiated at a later time, as necessary.

12. CITY'S RESPONSIBILITIES

12.1 Designate project representative and City project team to coordinate work activities of City project team, Consultant, and other affected parties.

12.2 Provide pertinent historical, current, and projected flow and growth data for Consultant use.

12.3 Make all policy and budgetary decisions so as to allow timely completion of the work.

12.4 Supply pertinent existing drawings, records, and available information.

12.5 Supply all field books, survey, and diary books for recording data.

12.6 Coordinate, arrange, and conduct meetings with representatives of affected agencies as required for completing the work.

12.7 Conduct related advertising, bidding process, and award of Contract (s) for construction.

13. SPECIFIC PROJECT INTENT'S AND SERVICES REQUIREMENTS

13.1 The resultant designs for each of the projects shall be in conformance with design standards and regulations imposed by federal, state and local agencies such as the Nebraska Department of Environmental Quality (NDEQ) and the City of Lincoln, Department of Building & Safety.

13.2 Phasing of construction will be needed to provide continuous wastewater treatment capability as well meet budgetary considerations.

13.3 Ultimate control and monitoring of process equipment for the projects and associated improvements shall be compatible with and incorporated into the current SCADA network and control system.

13.4 During the performance of services for and construction of these projects, the treatment processes must be maintained and comply with NPDES discharge permits and limitations.

13.5 New NPDES permits for the Theresa Street and the Northeast WWTP are currently being negotiated with NDEQ and EPA and it is anticipated that the permits and limits will be finalized in the 1st quarter of 2003.

13.5.1 Proposed preliminary limits for various parameters at the facilities are listed in Table No. 1 attached to this RFP.

13.6 Phasing plans and resultant implementation schedules for completing the work by the required dates and in a timely manner to allow for proper reviews by various agencies and developing of final funding adjustments and requirements for all projects.

14. NITRIFICATION CAPACITY IMPROVEMENTS - THERESA ST. AND NORTHEAST TREATMENT FACILITIES

14.1 **Purpose and Intent**. Provide preliminary and final designs for constructing improvements to the existing treatment facilities to provide for meeting the NPDES limits proposed for effluent ammonia for existing and proposed future flows and loads and meet the compliance schedules noted in the permits.

14.1.1 It is anticipated that there will be a 5 year compliance schedule in the permits.

14.2 The current treatment facilities do not have the capacity to meet the proposed NPDES discharge limits for effluent ammonia.

14.3 Recent improvements to the treatment facilities, such as improvements to the activated sludge processes for the East Side and West Side treatment trains at Theresa Street may facilitate compliance with the new limitations, however, these systems do not have the necessary total capacity to meet the proposed new limits.

14.4 Specific Project Design Elements and Requirements

14.4.1 Review the current capacities (hydraulic and organic) of both the Theresa Street and Northeast wastewater treatment facilities considering improvements that are currently under construction or design utilizing process models such as BioWin.

14.4.2 Review the anticipated NPDES permit requirements for the facilities and the projected flows and loads from the recently updated Facility Plan for the Lincoln Wastewater System.

14.4.3 Based on the review and analysis performed above, review and evaluate facility proposed alternative improvements described in the WW Facility Plan and identified in the design review process necessary to provide consistent compliance with discharge regulations and a dependable and reliable treatment facility.

14.4.4 Perform preliminary reviews and designs to identify improvement alternatives necessary to meet future NPDES requirements for the selected design period(s).

14.4.5 Flow equalization or treatment of in plant process flows with high concentrations of ammonia such as filtrate flows from digester supernatants, solids dewatering and thickening operations, injection site lagoon supernatant returns, etc. shall be reviewed and evaluated for reducing the impact of diurnal ammonia concentration on the current and proposed treatment processes.

14.4.6 Provisions and alternatives for handling and treating peak weather flows through or around existing and proposed treatment processes to comply with future SSO programs or NPDES permit conditions for wet weather flow events shall be reviewed and planned for in the final designs for nitrification.

14.4.7 Possible flow variable effluent permit limits and permit language for addressing peak wet-weather flows in the new NPDES permits are currently being considered but have not been finalized.

14.5 Theresa St. Facility

14.5.1 The Facility Plan proposes the building of a third treatment train to replace the current trickling filter train for meeting current and future nitrification and capacity requirements for this facility.

14.5.2 Initially, it is anticipated that this third train would be constructed in phases with the 1st phase being a 6 mgd capacity improvement followed by another 6mgd increment in the future as flows and loads dictate such improvement be constructed.

14.5.3 The initial sizing and phasing selected for this new train is based upon meeting projected flows and loads as well as funding projections and limitations during the design period.

14.5.4 Also, the initial sizing of the third train was based upon the process being similar to the current activated sludge treatment processes operating at the facility.

14.5.5 Additional alternatives to provide for smaller incremental nitrification capacity improvements identified by the Facility Plan, such as additional secondary clarification capacity etc. in the short term shall be reviewed and evaluated as part of this project.

14.5.6 The project for construction of a new primary clarifier(s) as described in this RFP and the Facility Plan shall be reviewed and coordinated with the construction of a new third treatment train.

14.5.7 All related improvements associated with the third train improvements such as electrical improvements, solids handling and pumping, control and SCADA improvements, etc. shall be part of this project.

14.6 Northeast Facility

14.6.1 Reviewing and evaluating the proposed alternatives for nitrification capacity improvements outlined in the Facility Plan Update including:

14.6.1.1 diverting approx. 4 mgd of flow to the Theresa St. plant during key times;

14.6.1.2 refurbishing and modifying the existing bio-towers to improve removals with the current activated sludge system;

14.6.1.3 decommissioning the existing bio-towers and upgrading the existing activated sludge process to remove ammonia; and

14.6.1.4 providing additional secondary clarification capacity as appropriate to each of the alternates.

14.6.2 If the selected alternate proposes utilizing the existing bio-towers replacement and upgrading of the existing redwood media, rotary distributors, ventilation system, tower containment walls, and other improvements would be required as these units have reached their useful life.

15. NEW PRIMARY CLARIFIER – THERESA ST.

15.1 Provide final design for construction of a new rectangular primary clarifier or two new circular clarifiers to replace existing clarifiers No's 1 & 2 to meet future capacity requirements and feed the new third treatment train for the nitrification project noted above.

15.2 Final design including evaluation and selection of one the above noted alternatives and construction of this project would need to be coordinated with the nitrification improvements.

15.3 The project would also include the replacement and consolidation of the existing primary sludge pumping system serving Primary Clarifiers No's 1, 2, 3 & 4 into a new primary sludge pumping station for this project.

16. FINAL CLARIFIER MODIFICATIONS AND IMPROVEMENTS – THERESA ST. AND NORTHEAST

16.1 This project is to provide preliminary and final design for construction of improvements and modifications to the existing final clarifiers to control the growth of algae in the effluent launders.

16.2 Also, the project would include modifications and improvements to the full surface skimming equipment to improve floatable solids removal from the flocculation wells and inner distribution boxes for the units at the Theresa St. facility.

16.3 The alternative of complete replacement of mechanisms to meet the above needs as well as improve clarification efficiency shall be reviewed and evaluated as part of the design for this project.

16.4 Coordination of these improvements with current and above noted projects and improvements occurring at the facilities is necessary.

17. GRIT HANDLING IMPROVEMENTS – NORTHEAST

17.1 This project is to provide preliminary and final design for construction of improvements to the existing aerated grit removal, grit washing and handling system to improve removal efficiencies and meet future peak flow capacity needs.

17.2 The project is shown as a project in FY03-04 of the current wastewater CIP program and thus, is not currently funded in the first year of the program.

17.3 Alternatives to be reviewed and evaluated include:

17.3.1 improvements and expansions to existing system and methodology;

17.3.2 replacement with vortex type grit removal and related washing system;

17.3.3 other technologies to improve capacity and capture of grit from projected influent flows during the future design life period.

17.4 Additionally, the design shall provide provisions for incorporating connection to future peak flow treatment facilities to meet future SSO regulations and limits; internal facility bypassing of the unit for maintenance; handling of return flows from Lincoln Electric System, Salt Valley Generating Station, and other processing elements.

18. OTHER RELATED IMPROVEMENTS ASSOCIATED WITH THE ABOVE NOTED PROJECTS – THERESA ST & NORTHEAST

18.1 Other related improvements associated with the above projects including necessary process piping and pumping changes; modifications to existing plant electrical systems; and, other modifications to the site to accommodate the above noted projects shall be incorporated with and performed at the same time as main noted project to which the improvement applies.

19. TENTATIVE PROJECT SCHEDULES THERESA ST. WWTF PROJECTS

19.1 Nitrification Capacity Improvements

Begin Preliminary and Final Design	Feb., 2003
Complete Final Design	Sept., 2003
Complete Construction	Sept., 2007

19.2 New Primary Clarifier

Begin Preliminary and Final Design	Feb., 2003
Complete Final Design	Sept., 2003
Complete Construction	Sept., 2006

19.3 Final Clarifier Modifications and Improvements

Begin Preliminary and Final Design	Feb., 2003
Complete Final Design	Aug., 2003
Complete Construction	Dec., 2004

20. TENTATIVE PROJECT SCHEDULES NORTHEAST WWTF PROJECTS

20.1 Nitrification Capacity Improvements

Begin Preliminary and Final Design	Feb., 2003
Complete Final Design	Sept., 2003
Complete Construction	Sept., 2005

20.2 Grit Handling Improvements

Begin Preliminary and Final Design	Sept., 2003
Complete Final Design	June, 2004
Complete Construction	Dec., 2005

20.3 Final Clarifier Modifications and Improvements

Begin Preliminary and Final Design	Feb., 2003
Complete Final Design	Aug., 2003
Complete Construction	Dec., 2004

21. PROPOSAL CONTENTS AND EVALUATION CRITERIA.

21.1 Describe and outline the **Firm's Approach** to performing the work required by this project.

21.1.1 Include implementation plan describing project phases, key work elements to meet critical project dates, and a recommended schedule of meetings to provide for timely input by City project team.

21.2 Outline of the **Proposed Project Schedule** to meet the project schedules listed in this RFP shall be included.

21.2.1 Provisions for meaningful input from City project team during the initial project review are essential and shall be addressed.

21.3 Delineate the **Project Team and Organization**.

21.3.1 Include names of key individuals to be assigned to, and work directly on, the project.

21.3.2 Describe specific areas and limits of responsibilities for each of the team members and proposed sub-consultants to be utilized.

21.3.3 Include a project team organizational chart showing lines of responsibility and extent of involvement for sub-consultants. Include resumes for project team members, key individuals, and sub-consultants.

21.4 Describe the **Ability of the Firm to Meet the Intent of Required Services** outlined in this RFP, including:

21.4.1 Time availability of team members to meet the tentative project schedule.

21.4.2 Quality Assurance and Quality Control (QA/QC) review procedures to be utilized on this project.

21.4.3 Cost estimating and cost control procedures used by firm on similar projects.

21.4.4 A statement of general qualifications and background experience of the firm and project team members, including sub-consultants in this type of project and work.
21.4.4.1 A comparison to similar projects of similar size and capacity.
21.4.5 Listing of types of anticipated assistance that may be required from the City project team or other City agencies.
21.4.6 Brief list of contacts of former clients (to include contact person, title, and telephone number) for which your firm was engaged with the past five (5) years to perform similar services as described herein.

22. ESTIMATED FEES

22.1 Submit your firm's estimate of the proposed fees for services outlined in this RFP for **each individual project** in summary and spreadsheet formats including projected hours, hourly rates, and total costs for performing the various elements of the work for each of the projects or combination of projects described in this request.
22.2 Submit fees in one separate sealed envelope with the specification number, project name, and your firms name and address clearly marked on the outside of the envelope.

23. EVALUATION CRITERIA

23.1 Understanding of the requirements of this project.
23.2 Relevance and suitability of the project approach and schedule to meet the needs of the City.
23.3 Qualifications and expertise of the key personnel to be assigned to this project.
23.4 Background experience of the firm and the project team as it directly relates to this project.
23.5 Record of past performance on similar projects.
23.6 Comments and opinions provided by references.
23.7 Quality and cost control procedures to be used on this project.
23.7.1 Identify personnel responsible for these controls.
23.8 Resources of the firm to conduct and complete this project in a satisfactory manner.
23.8.1 Factors to be considered include: current work load (including current work with the City), proposed schedule for completion, and ability and willingness to commit the key personnel.
23.9 Clarity, conciseness, and organization of proposal.
23.10 NOTE: Proposals will be reviewed, evaluated and ranked (e.g.: 1, 2, 3) in accordance with the City's selection process and procedure.

24. SUBMITTAL PROCEDURES

24.1 Submit six (6) copies of your proposal and detailed cost information (spreadsheet format) to the office of the Purchasing Agent, located at Suite 200, K Street Complex, 440 South 8 Street, Lincoln, Nebraska, 68508 **no later than the date stated in the Notice for Request for Proposals.**

25. CONTACTS

25.1 Contact regarding the development of a proposal shall be made only with the Project Selection Committee Chair, Mr. Gary Brandt, Utilities Coordinator, Lincoln Wastewater System, (402) 441-7968, cc: Vince M. Mejer, Purchasing.
25.2 Any follow-up conversations with City staff will be directed by the Selection Committee Chair.
25.3 Any addenda answering questions or providing clarifications will be sent out by the Selection Committee Chair.

Company Name _____

PROPOSAL
SPECIFICATION NO. 03-025
OPENING TIME: 12:00 NOON
DATE: February 5, 2003

The undersigned SUBMITTER, having full knowledge of the requirements of the City of Lincoln for the below listed items and the contract documents (which includes Request for Proposals), Instructions, this Proposal, Specifications, Contract, and any and all addenda) and all other conditions of the Proposal, agrees to enter into a contract with the City for the below listed items for the performance of this Specification, complete in every respect, in strict accordance with the contract documents at and for fees listed below.

THE REQUIREMENTS FOR:
PROFESSIONAL ENGINEERING DESIGN SERVICES
FOR THE
LINCOLN WASTEWATER SYSTEM

PROJECT	**ESTIMATED FEES**
THERESA ST. WWTF PROJECTS: - Preliminary & Final Design Services:	
Nitrification Capacity Improvements (Project No. 502420)	$ _____
New Primary Clarifier (Project No. to be assigned)	$ _____
Final Clarifier Modifications & Improvements (Project No. 502420)	$ _____
NORTHEAST WWTF PROJECTS - - Preliminary & Final Design Services:	
Nitrification Capacity Improvements (Project No. 502510)	$ _____
Grit Handling Improvements (Project No. to be assigned)	$ _____
Final Clarifier Modifications & Improvements (Project No. 502510)	$ _____

Notes: 1. Submitters may provide Estimated Fees for any one or combination of the above projects noted above.

The undersigned signatory for the firm represents and warrants that he/she has full and complete authority to submit this proposal to the City, and to enter into a contract if this or portions of this proposal are accepted.

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NOTE:

RETURN SIX (6) COPIES OF YOUR RESPONSE TO THIS RFP AND SUPPORTING MATERIALS AND ONE (1) FEE PROPOSAL IN A SEPARATE ENVELOPE.
MARK OUTSIDE OF ENVELOPE AS FOLLOWS:

SEALED PROPOSAL FOR SPECIFICATION NO. 03-025

COMPANY NAME	**BY (Signature)**
STREET ADDRESS or P.O. BOX	**(Print Name)**
CITY, STATE ZIP CODE	**(Title)**
TELEPHONE No. FAX No.	**(Date)**
EMPLOYER'S FEDERAL I.D. NO. OR SOCIAL SECURITY NUMBER	**ESTIMATED DELIVERY DAYS**
E-MAIL ADDRESS	**TERMS OF PAYMENT**

RAW WATEWATER PUMP STATION
TO BE REMOVED
PRIMARY BASIN NO. 1
PRIMARY BASIN NO. 2
4'x2' BOX CULVERT
TRICKLING FILTER
TRICKLING FILTER EFFLUENT PUMP STATION
TRICKLING FILTER FINAL BASIN
20" RECIRCULATION LINE
30"x38" BOX CULVERT
TO BE REMOVED
AERATED GRIT CHAMBER
PRIMARY BASIN NO. 3
PRIMARY BASIN NO. 4
AERATION BASIN NO. 1
AERATION BASIN NO. 2
DISTRIBUTION BOX NO. 1
30" BYPASS
24" BYPASS
FINAL BASIN NO. 1
FINAL BASIN NO. 2
JUNCTION MANHOLE
JUNCTION BOX
JUNCTION BOX
JUNCTION BOX
OUTFALL STRUCTURE
SALT CREEK
TO NEW PRIMARY CLARIFIERS
TO WET WEATHER TREATMENT
BYPASS CHANNEL
BYPASS CHANNEL
VALVE VAULT
GRIT COLLECTION BASINS
FLOW DISTRIBUTION
PRIMARY CLARIFIER FLOW SPLITTER
PRIMARY BASIN NO. 5
PRIMARY BASIN NO. 6
DISTRIBUTION BOX NO. 1
AERATION BASIN NO. 3
AERATION BASIN NO. 4
35" BYPASS
FINAL BASIN NO. 3
FINAL BASIN NO. 4
DISTRIBUTION BOX NO. 2
DISTRIBUTION BOX
JUNCTION BOX
OUTFALL STRUCTURE
CHLORINE CONTACT BASIN NO. 1
FROM NEW PLANT
CHLORINE CONTACT BASIN NO. 2
ULTRAVIOLET DISINFECTION BUILDING

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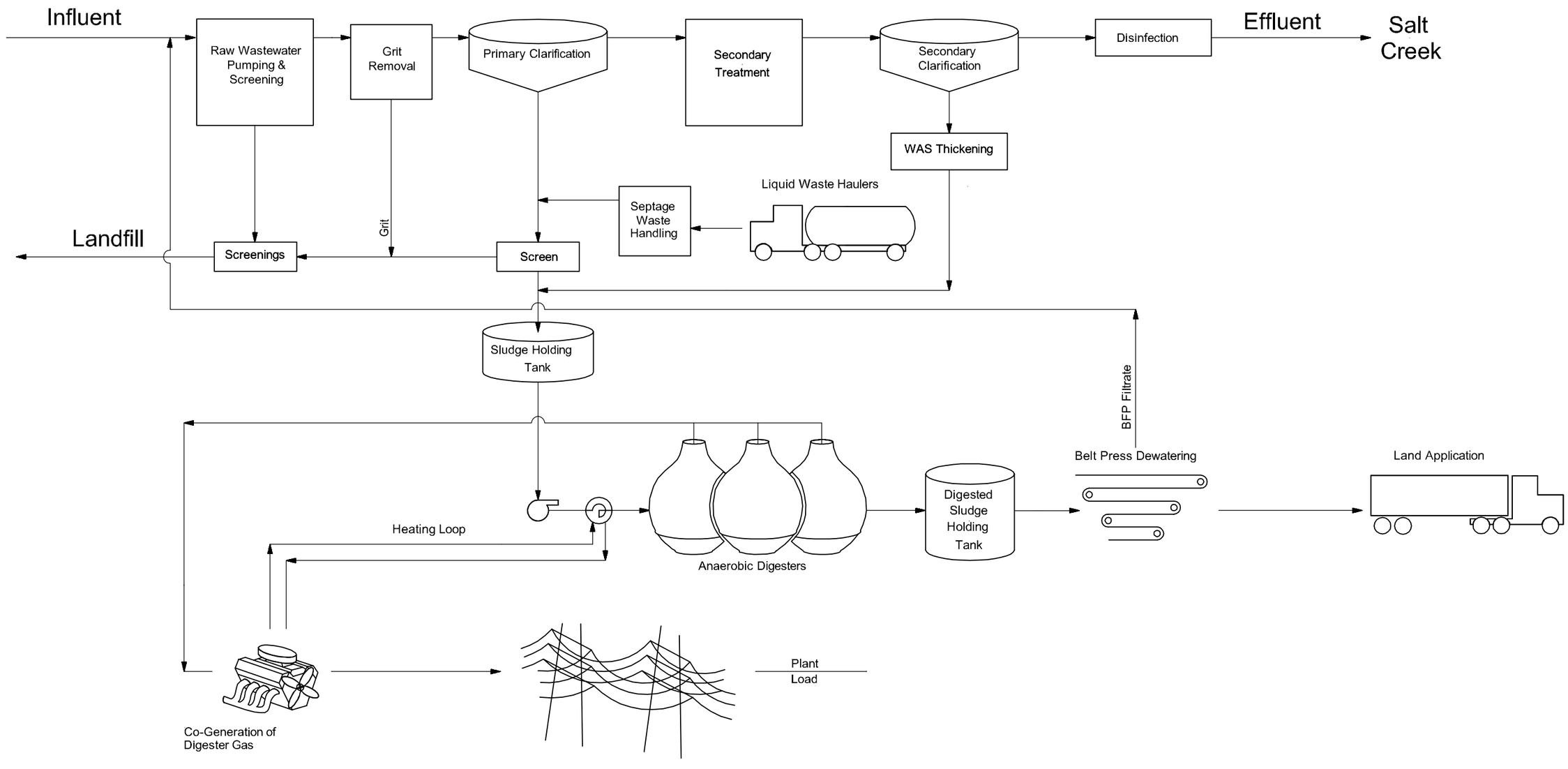
BROWN AND CALDWELL / MWH MONTGOMERY WATSON HARZA

Lincoln Wastewater System Facilities Plan Update
CITY OF LINCOLN
THERESA STREET WASTEWATER TREATMENT PLANT

Figure No. 1
Process Schematic



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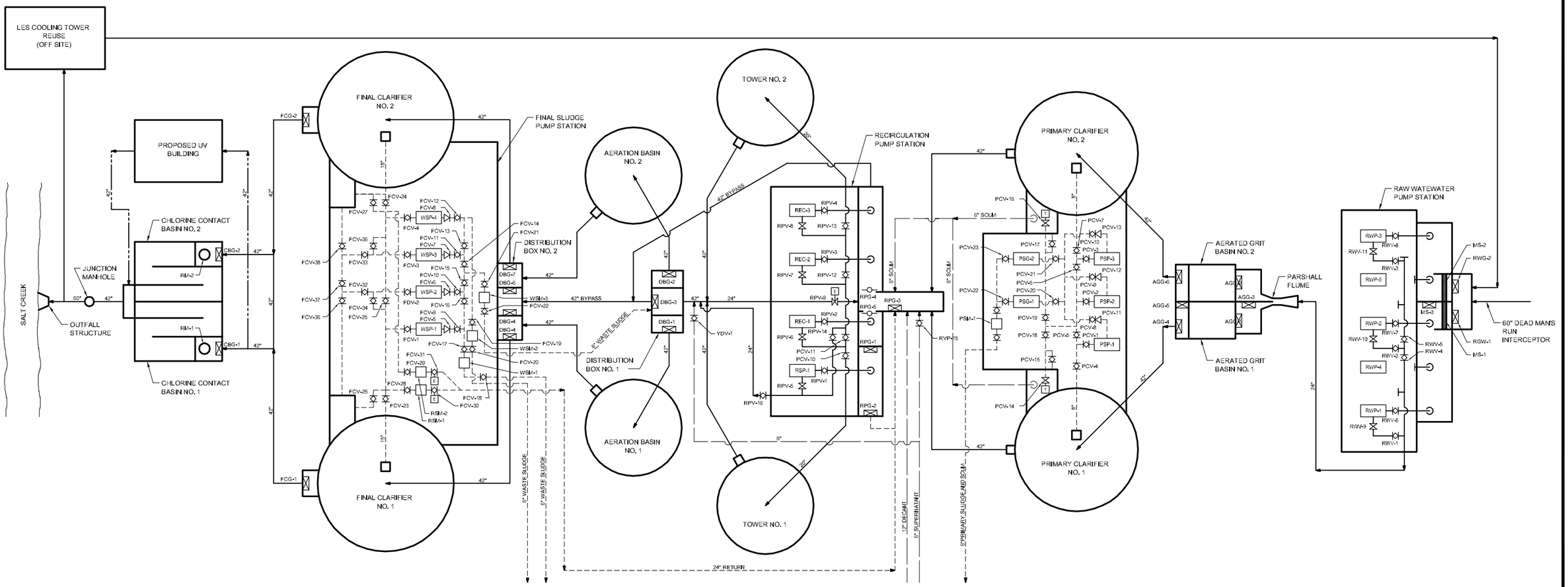
BROWN AND CALDWELL / MWH MONTGOMERY WATSON HARZA

Lincoln Wastewater System Facilities Plan Update
CITY OF LINCOLN
THERESA STREET WASTEWATER TREATMENT PLANT

Figure No. 2
Solids Handling Schematic



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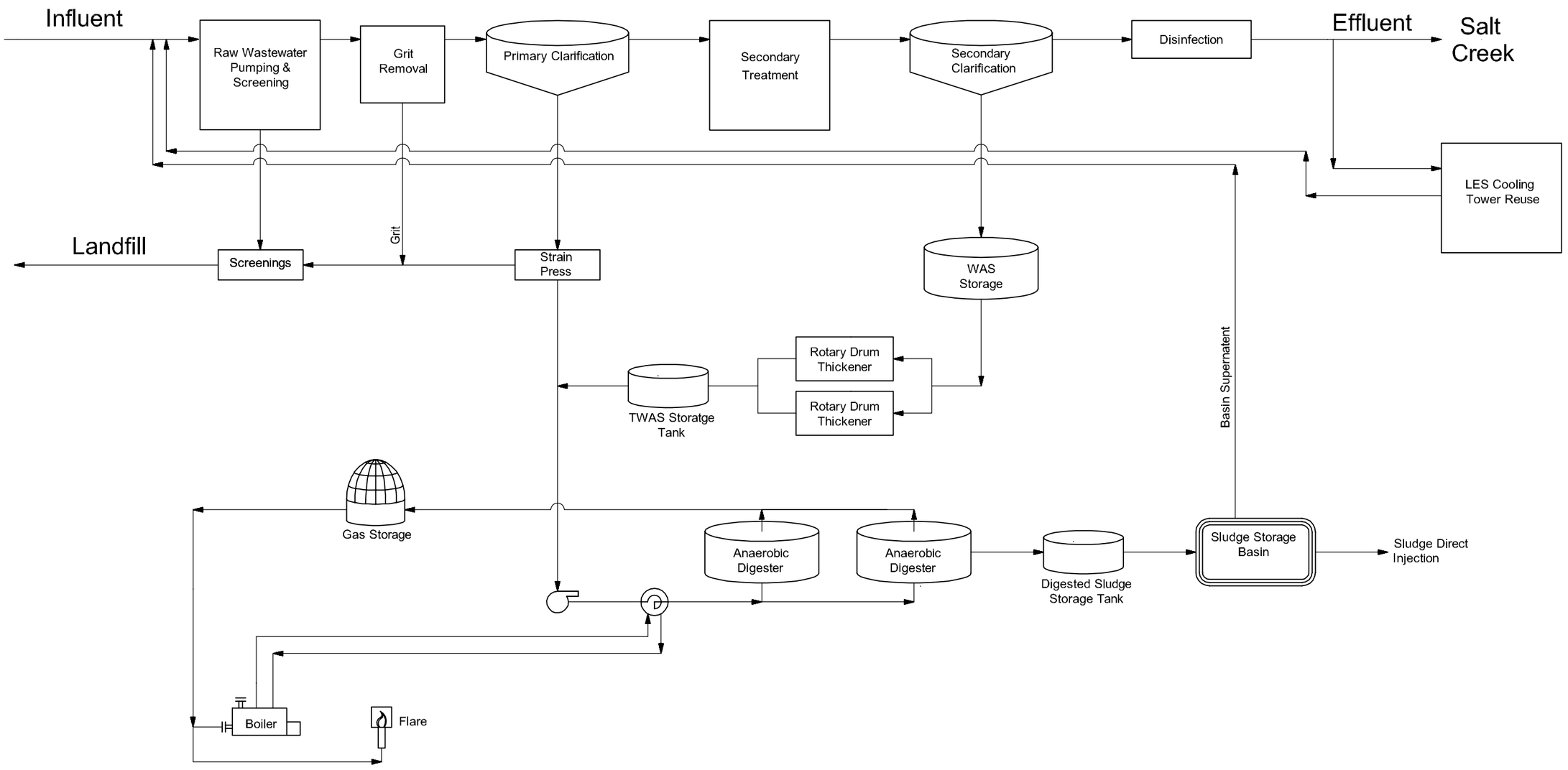
BROWN AND CALDWELL / MWH MONTGOMERY WATSON HARZA

Lincoln Wastewater System Facilities Plan Update
CITY OF LINCOLN
NORTHEAST WASTEWATER TREATMENT PLANT

Figure No. 3
Process Schematic



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BROWN AND CALDWELL / MWH MONTGOMERY WATSON HARZA

Lincoln Wastewater System Facilities Plan Update
CITY OF LINCOLN
NORTHEAST WASTEWATER TREATMENT PLANT

Figure No. 4
Solids Handling Schematic